Installation Guide

V3.0 June 2010

ALF40

Bass Enhancer

amina®

TECHNOLOGIES Ltd

Caution: Read this before operating your unit

01 To ensure optimal performance, please read this guide carefully and keep in a safe place for future reference.

02 Install this product in a cool, dry, clean place - away from direct sunlight and heat sources, vibration, dust and moisture.

03 Do not expose this unit to sudden temperature changes or locate it in an environment with high humidity. This is to prevent condensation forming inside which may cause damage to the unit.

04 Do not clean this unit with chemical solvents as this may damage the finish. Use a clean, dry or damp cloth.

05 Do not attempt to modify or repair the unit. Contact your distributor or manufacturer if a fault should occur.

06 Ensure that any fixing structures will support the weight of this product.

WARNING:

No attempt should be made to install this product within existing building structures unless you are certain no electric cables, water pipes, gas pipes or supporting joists will be cut through.

Contents

01 Included in the carton

02-3 Using the Adjustable Port System

04 Positioning the ALF40

05 Positioning the ALF40 (Diagram)

06 Using the supplied Port Trim

07 Connection Options (Passive 2.1)

08 Connection Options (Passive 2.2)

09 Connection Options (Active 2.1)

10 Connection Options (Active 2.2)

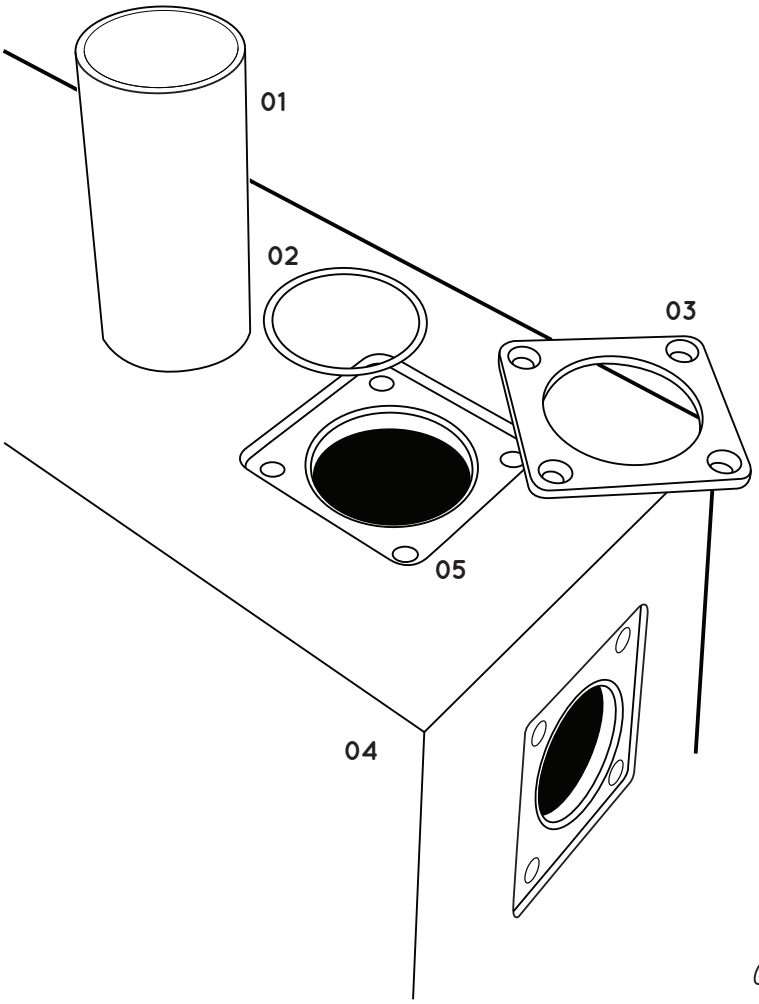
11 Setup Tips

12 Specifications

13 Dimensions

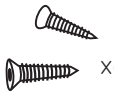
01

Included in the carton

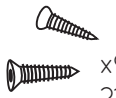


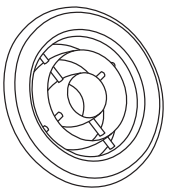
Parts:

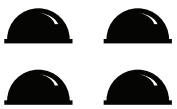
01	Port x1
02	Rubber O-ring x1
03	Port Plate x1
04	Cabinet x1
05	Port opening x2
06	Port Trim x1
07	Blanking Plate x1
08	Port Plate and Blanking Plate Screws x8
09	Fixing Screws (6x 12.3mm for cabinet. 9x 21 mm for joist etc)
10	Rubber feet x4
11	Bracket x3

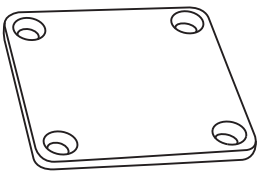

x8 **08**

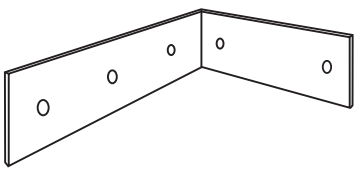
x6
12.3mm


x9
21mm **09**


06


10


07


11

Please contact your dealer if any of the above parts are missing or you require spares.

WARNING: TAKE CARE NOT DROP OBJECTS THROUGH THE PORT HOLES AND INTO THE ALF40 ENCLOSURE.

02

Using the Adjustable Port System

The ALF40 features a unique port system allowing for greater flexibility when positioning and concealing the product.

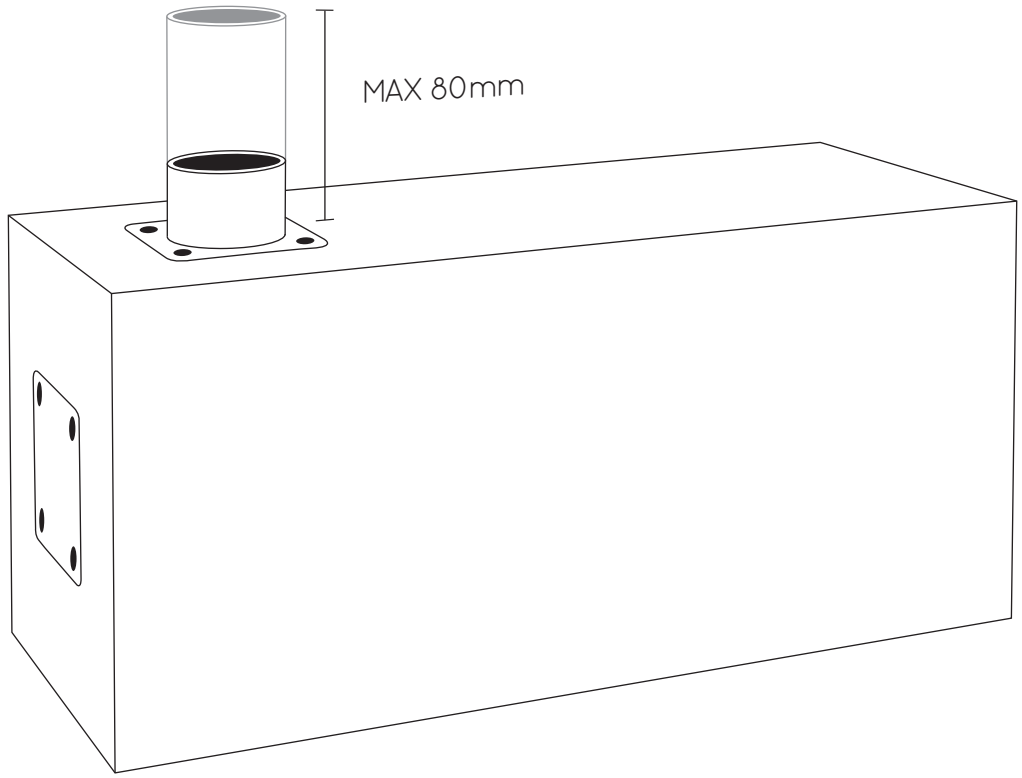
There are two optional positions where the port can be connected to the ALF40 cabinet. An aluminium plate (port plate) and a rubber o-ring provide an air tight seal around the port. A similar blanking plate is used to cover and seal the unused port hole.

To remove the port and blanking plates use a number 3 Hex screwdriver to remove the four fixing screws. Then remove the plate from the cabinet taking care not to drop the o-ring through the port openings.

When adjusting the port length, remove the screws along with the port plate and pull/push the port by gripping the inside surface. Ensure the o-ring is correctly positioned in its rebate before re-securing the port plate and make sure the port is absolutely firm. If it appears loose, check the o-ring has not dropped through the opening.

Top Position

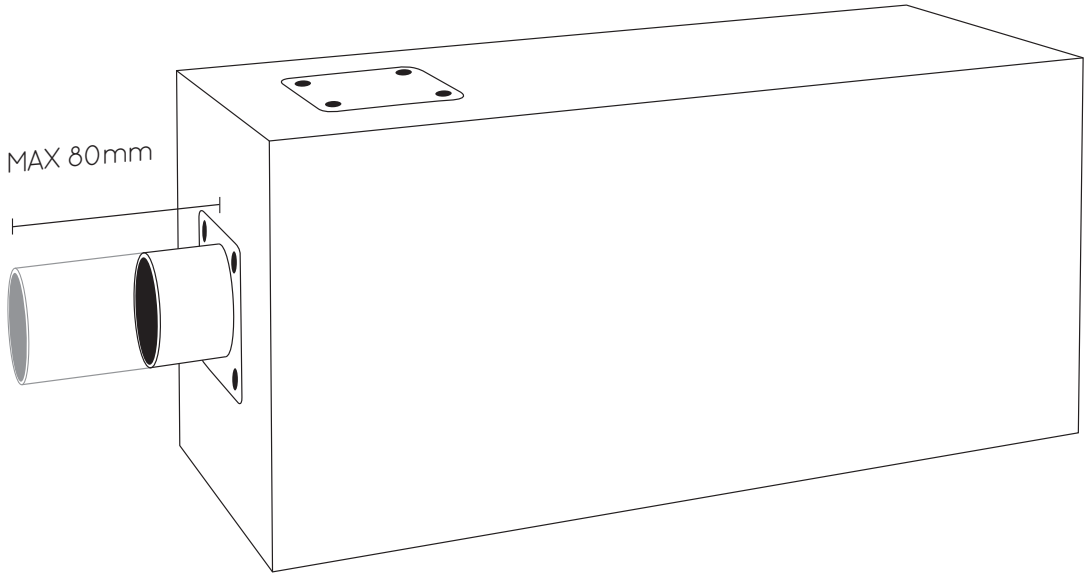
This port position can be useful if you need to stand the ALF40 on its end (connection terminal facing upward).



03

Using the Adjustable Port System

End Position



Important notes:

01 ALWAYS loosen the four screws in the port plate before adjusting the port.

02 The blanking plate MUST always be screwed down over the port opening that is not in use.

03 Be sure to tighten both the port plate and the blanking plate. Never over-tighten the screws.

04 Use ONLY the supplied screws to fix the port and blanking plates.
Contact your dealer if spares are required.

05 Ensure the rubber o-ring is correctly in position around the port and sitting within the circular rebate.

06 To release the blanking plate from its position, it may be necessary to push it from behind from within the cabinet. This can be done via the other port opening once the port is removed.

Positioning the ALF40

Free Standing

The ALF40 can be positioned anywhere within a room and in any orientation. A location near the corner of a room will give the most bass output however it is important to allow the bass port to breathe. Do not place any solid objects closer than 50mm (2") directly in front of the port. Adhere the supplied rubber feet to the cabinet, this will protect the product from dirt and scratches when positioned on the floor.

Fixing Brackets

Use the supplied brackets to secure the ALF40 to a solid structure. Use only the supplied, 12.3mm screws to fix the brackets to the cabinet. Never use longer screws as these may damage the unit's internal components. Ensure the brackets are not fixed over the port plate, blanking plate or connection terminal.

Concealed Placement

The ALF40 can be placed within furniture, behind wall panelling or even within a ceiling cavity. Whatever structure you install the ALF40 inside, it is important to create a suitable hole for the port to protrude through allowing it to breathe into the listening room.

Use the brackets and screws provided to secure the ALF40 within the structure.

In-Ceiling

The illustration on the next page shows how the brackets supplied can be used to fix the ALF40 to a ceiling joist.

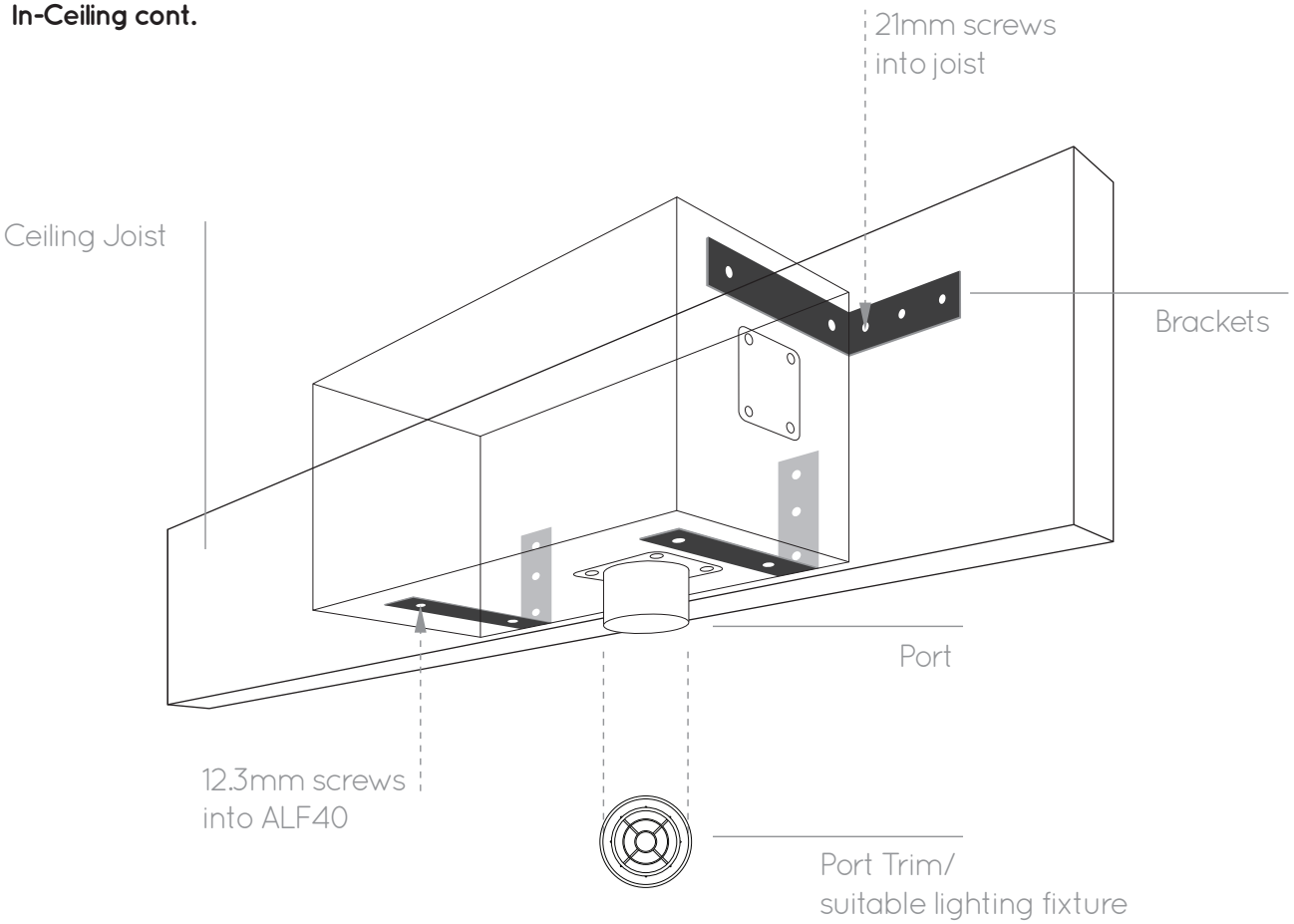
Notice the port protrudes from the cabinet - this allows it to then protrude through a suitable hole cut in the plasterboard ceiling layer.

The supplied Port Trim may be placed over the port opening to improve its appearance, (this is detailed on the next page).
Alternatively a suitable lighting fixture bezel may be used in a similar way. The Port diameter dimension of 43mm is designed so it is the same dimension as a GU10 light bulb, this will help when fitting a lighting fixture bezel. Ensure any fixtures used are securely fitted to avoid audible vibrations.

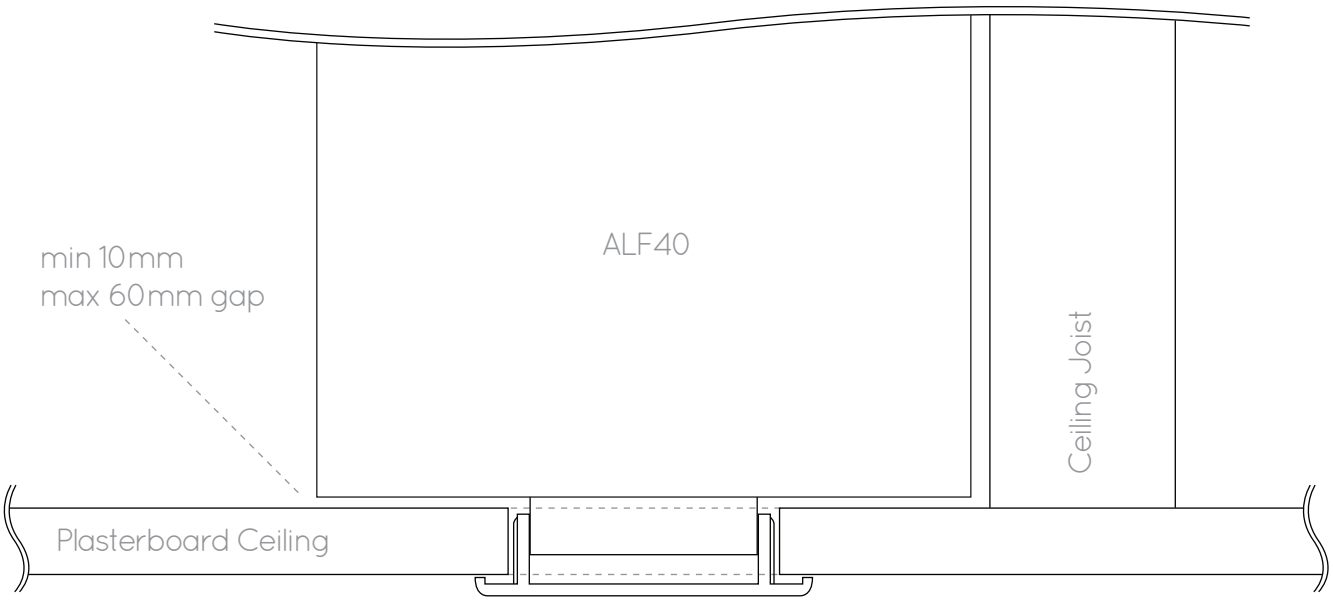
Note:
When using a lighting fixture bezel, be sure not to position it as part of the lighting pattern as this will result in a dark patch within the room.

Positioning the ALF40 (Diagram)

In-Ceiling cont.

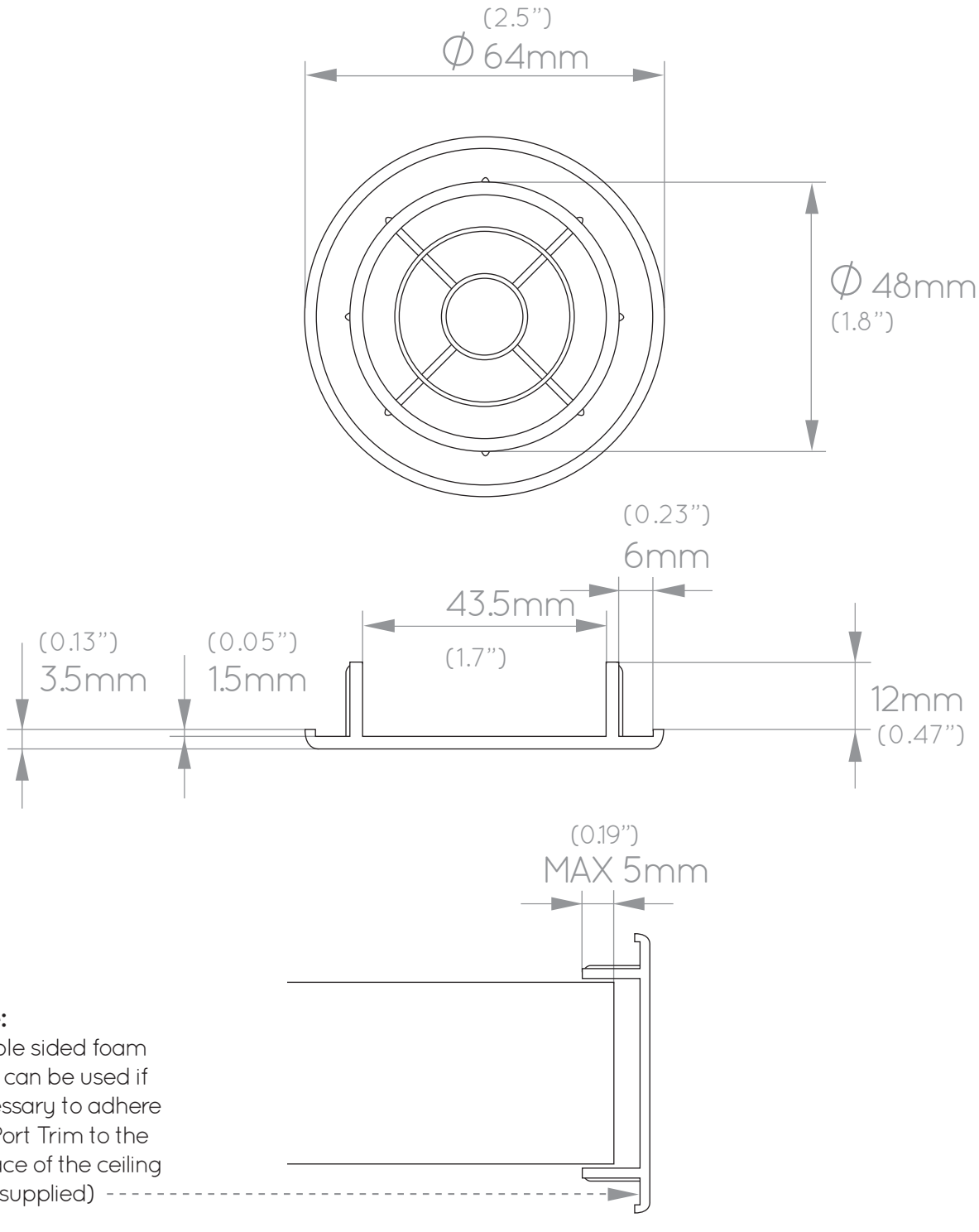


Detail view



Using the supplied Port Trim

The supplied Port Trim can be used to improve the appearance of the port when, for example, the ALF40 is installed behind a plasterboard ceiling. It is designed to fit up to 5mm over the end of the protruding port.

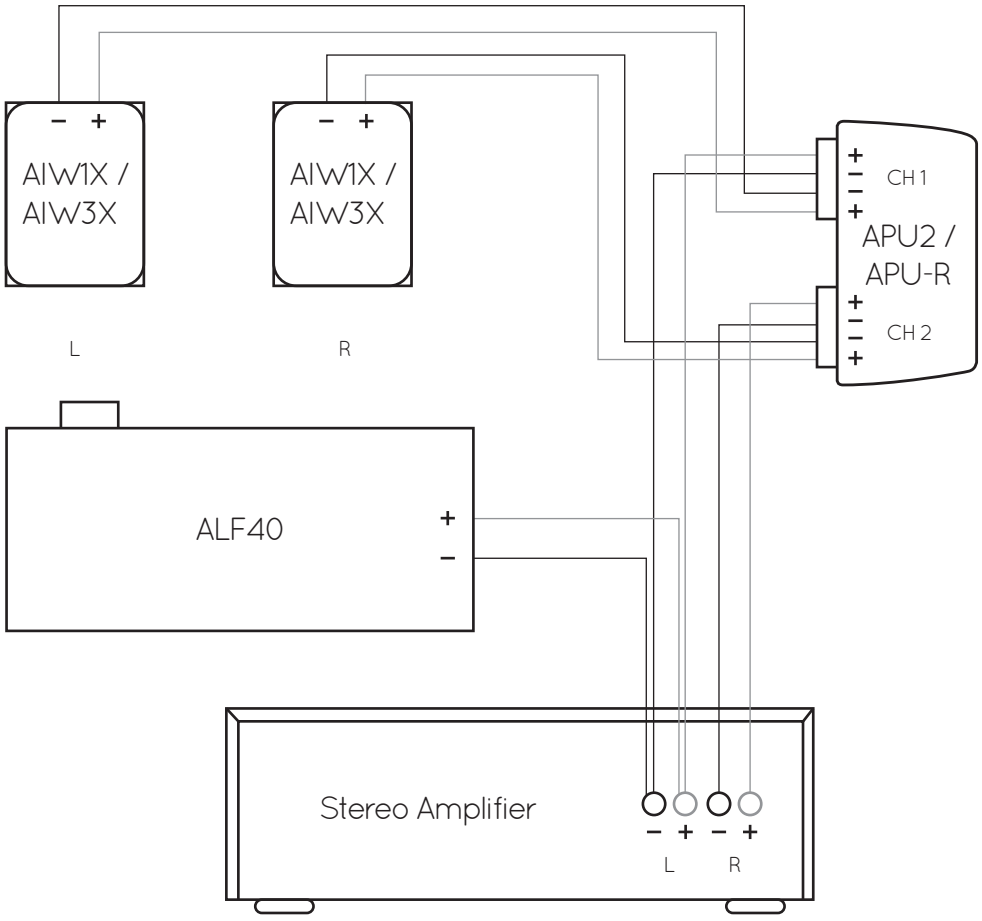


Note:
Double sided foam tape can be used if necessary to adhere the Port Trim to the surface of the ceiling (not supplied)

Connection Options (Passive 2.1)

The ALF40 has been optimised to work with the Amina AIWX series of Invisible speakers.
The following examples illustrate its use with these series of speakers, however the ALF40 can also be used to enhance other manufacturers speakers. The ALF40 is designed so it can be connected in parallel with AIW1X, AIW3X and AIW5X speakers.
Non Amina satellite speakers should be a minimum of 8 Ohms if wired in parallel with an ALF40.

Passive Stereo 2.1 : AIW1X / AIW3X pair + ALF40



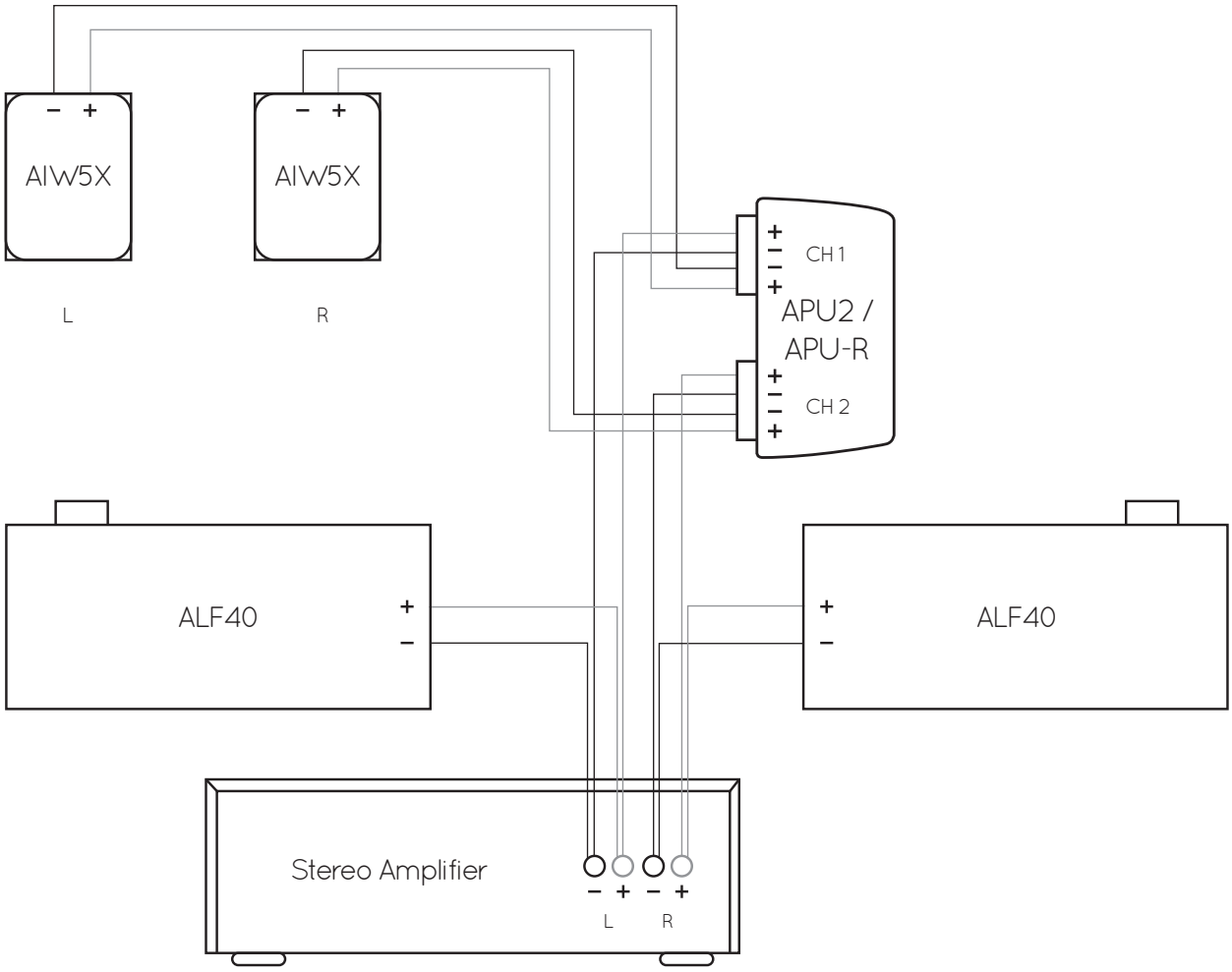
Note: Amplifier must be 4 Ohm stable.

In this scenario, one of the amplifier channels (left or right) is used to drive the ALF40 and one of the AIWX speakers together in parallel. It is assumed bass frequencies are mixed in mono on most program material, however for orchestral music better performance will be obtained with the ALF40 connected to the left channel of the amplifier.
The output of an ALF40 in most situations will match a pair of AIW1X or AIW3X speakers (2x ALF40 may be necessary to match a pair of AIW3X in a large room).

Note:
You may need to adjust the amplifier's balance control to obtain an equal output from the AIWX speakers.

Connection Options (Passive 2.2)

Passive Stereo 2.2: AIW5X pair + 2x ALF40



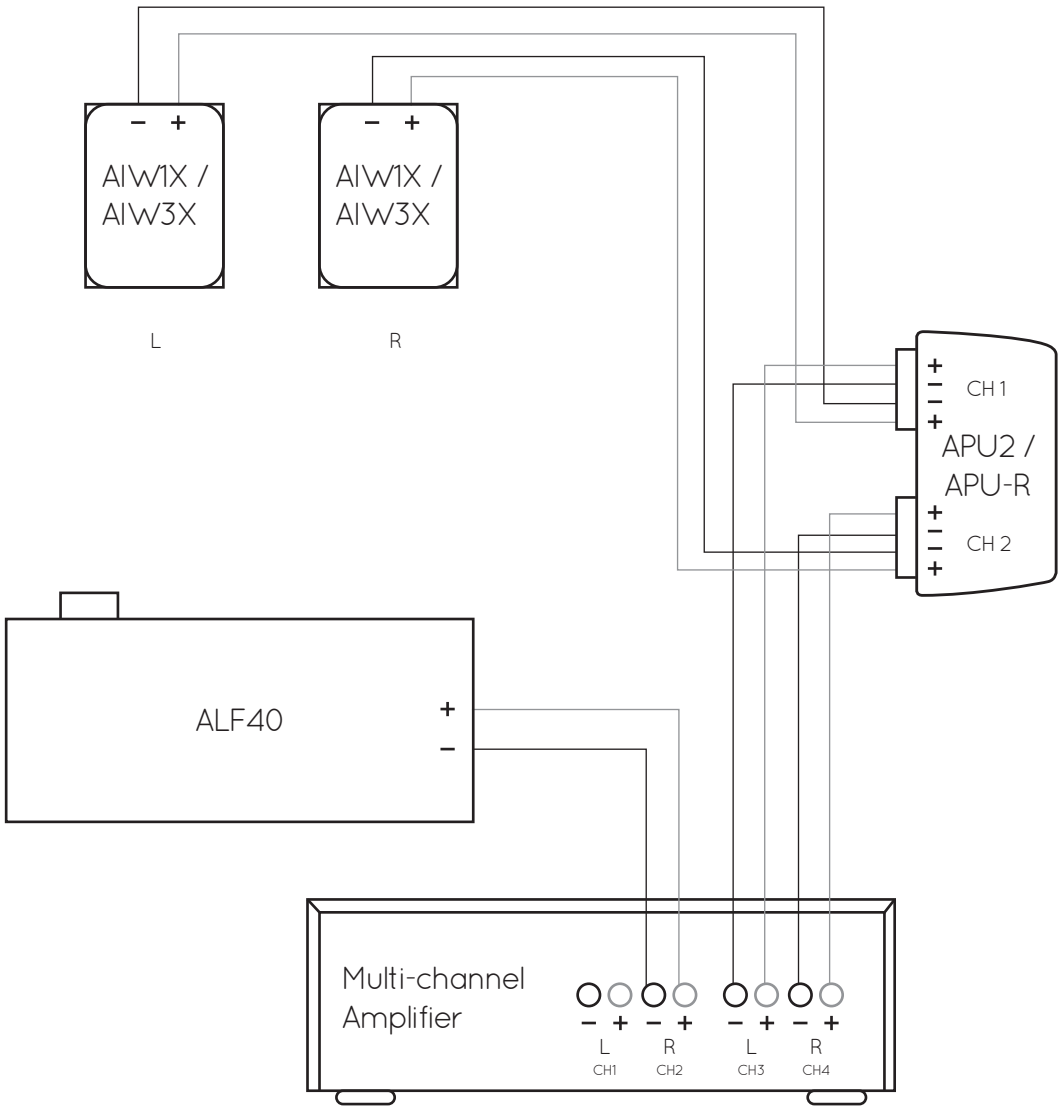
Note: Amplifier must be 4 Ohm stable.

For systems using a pair of AIW5X speakers, a pair of ALF40's will be necessary. In this scenario both channels of the stereo amplifier drive one ALF40 in parallel connection with an AIW5X.

This scenario will also apply to a situation where a pair of AIW3X speakers are used in larger rooms or where more bass is required.

Connection Options (Active 2.1)

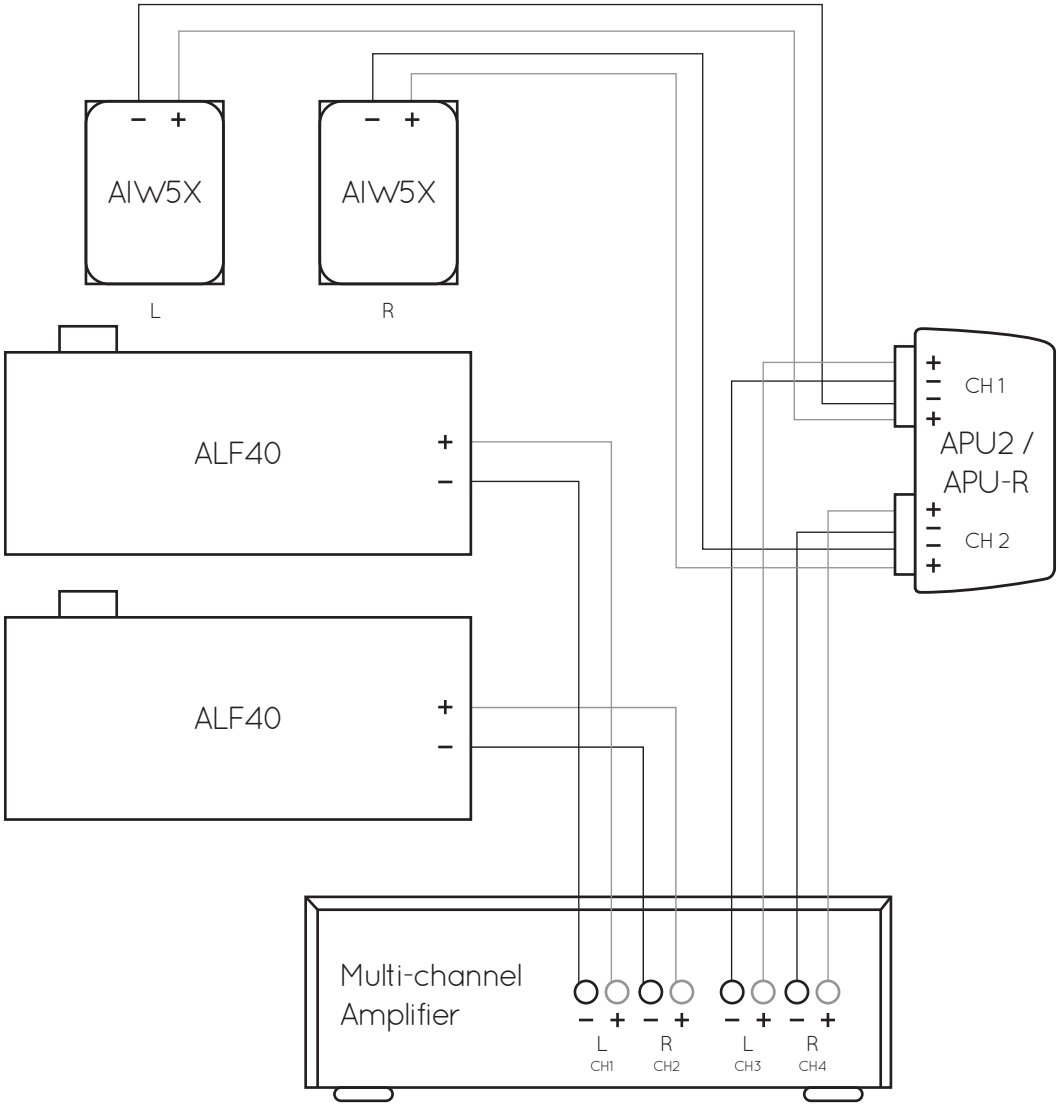
Active Stereo 2.1: AIW1X / AIW3X pair + ALF40



By connecting a single ALF40 to its own amplifier channel, its output (relative to the AIW1X / AIW3X pair) can be set optimally. In larger rooms care should be taken not to adjust the relative output of the ALF40 too high. This may result in the unit reaching its mechanical limits well before that of the accompanying AIWX speakers. If this is the case , consider using two ALF40's (Active Stereo 2. 2).

Connection Options (Active 2.2)

Active Stereo 2.2: AIW5X pair + 2x ALF40



For systems using a pair of AIW5X speakers, two ALF40's will be necessary. In this scenario the amplifier will need four independent channels.

This setup will work equally well with a pair of AIW3X speakers.

Setup Tips

01 When setting up any of the above system scenarios, it is advised to experiment with connecting the ALF40 in reverse phase with respect to the AIWX series speakers.
Often the reverse-phase connection results in better integration and slightly higher sound pressure level through "cross-over" region.
Using pink noise can be a good way of judging the difference between the in-phase and reverse-phase connections.

02 In scenarios 2 + 3 only, a maximum number of two ALF40s may be connected in parallel to a single amplifier output (amplifier must be 4 ohm stable). This will help provide the correct low frequency sound pressure levels in large rooms without the need for additional amplifier channels.

03 Where there is more than one pair of AIWX speakers in a room, decide which of the above scenarios is applicable to the system then multiply the number (e.g 2.1) by the number of speaker pairs.
Example: a very large reception room requires four AIW3X speakers and the amplifier has provision for up to six independent amplifier channels. This could then be an Active 4.2 system (2.1x2 = 4.2) or a passive 4.4 system (2.2x2 = 4.4) depending on the amount of bass output required.

04 To avoid unwanted vibrations, ensure the ALF40 is fixed securely to a structure or, if free standing, the supplied rubber feet are used.

Specifications

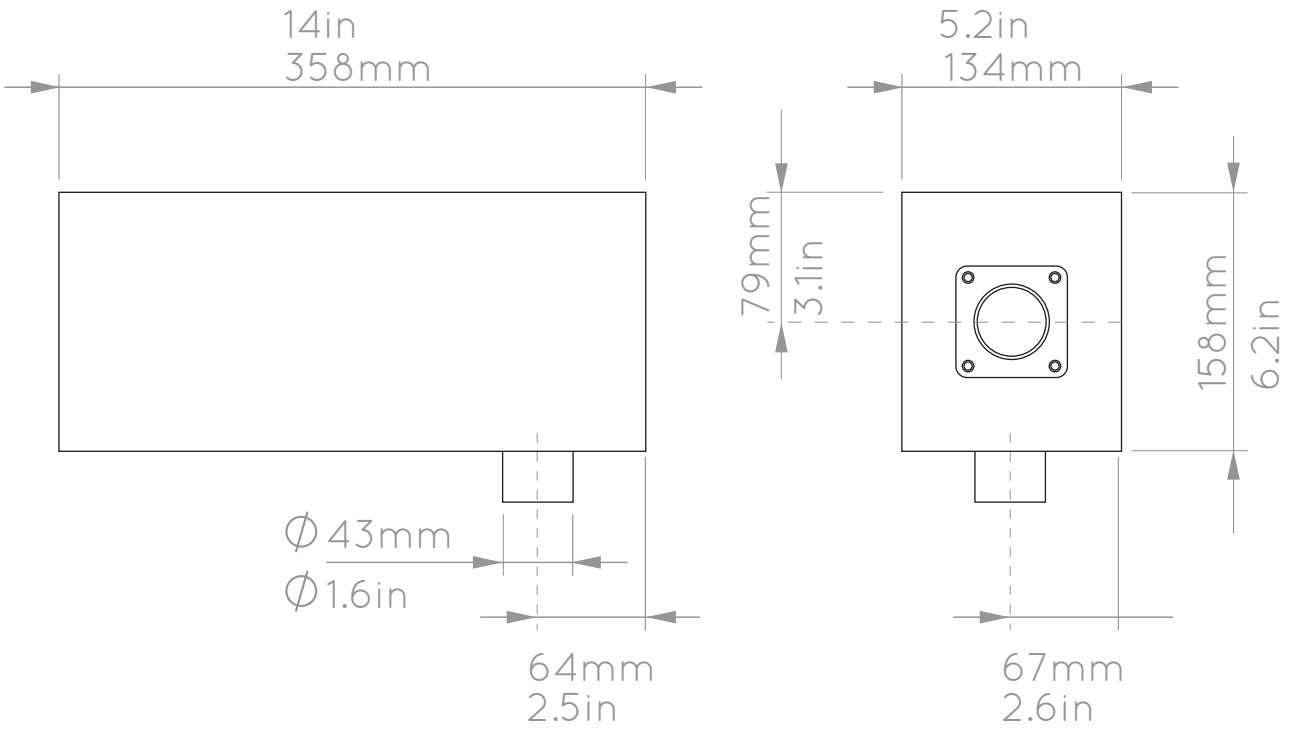
Dimensions:	358mm x 159mm x 134mm (14. 2" x 5. 3" x 6. 3")
Weight:	3. 03Kg (6. 67lbs)
Design:	Ported, acoustic bandpass with built in protection circuit
Compatability:	Optimised for Amina AIWX series speakers (can also be used with other 8Ohm speakers)
Power Handling:	40W continuous
Nominal Impedance:	8 Ohms (4 Ohms when used in passive configurations with the AIWX speakers) 100V/70V transformer option available
Frequency Response:	60Hz - 150Hz (+/-6dB), 24dB bandpass octave slope
Sensitivity:	88dB @ 1m/2. 83V RMS
Maximum SPL/1m:	103 dB
Port location:	Front or end convertible + length adjustable
Port diameter I.D / O.D:	39mm (1. 55") / 43mm (1.7")
Connection:	3-way binding post (accepts 4mm plugs)

Limited Warranty:

The ALF40 is designed to operate reliably for many years. Correctly installed and in accordance with these instructions, Amina warranties the ALF40 against defective materials and workmanship for a period of one year.

CE RoHS Compliant

Dimensions


14in
358mm
5.2in
134mm
79mm
3.1in
158mm
6.2in
Ø 43mm
Ø 1.6in
64mm
2.5in
67mm
2.6in

amina®

TECHNOLOGIES Ltd

Amina Technologies Ltd
Cirrus House, Glebe Road
Huntingdon, Cambs, PE29 7DX England
T: 00 44 1480 354390 / F: 00 44 1480 356564